

## **ADDENDUM NO. 5**

DATE: **April 11, 2016**  
OWNER: **City of Stockbridge**  
PROJECT: **Willow Springs Pump Station Rehabilitation**  
C & S PROJECT NO.: **S9100.004**  
ENGINEER: **Martin C. Boyd, P.E.**  
**CARTER & SLOOPE, INC.**  
**P.O. Box 534**  
**Watkinsville, Georgia 30677**  
**Telephone: 706-769-4119 Fax: 706-769-4546**  
**Email: mboyd@cartersloope.com**

**BID DATE: April 18, 2016**

**BID OPENING: 2:00 PM Local Time**

TO ALL BIDDERS:

ACKNOWLEDGE RECEIPT OF THIS ADDENDUM BY INSERTING ITS NUMBER IN YOUR BID FORM – SECTION 00400. FAILURE TO DO SO MAY SUBJECT BONA FIDE BIDDERS TO DISQUALIFICATION. THIS ADDENDUM FORMS A PART OF THE BIDDING DOCUMENTS WHICH ARE HEREBY MODIFIED IN THE FOLLOWING RESPECTS:

### **I. CONTRACT DOCUMENTS AND SPECIFICATIONS**

#### **A. Section 00400 – Bid Form**

1. Refer to Section 0400 – Bid Form that was revised per Addendum No. 2. Under item 4.C.2 – Force Main, change “270 L.F.” to read “50 L.F.” for Open Cut 12” Dia. Steel Casing, 0.250” W.T. (carrier pipe paid under separate cover).

**CLARIFICATION:** There is 270 LF of Asphalt Roadway Repair / Replacement that will be paid for under item 4.E.1 to pay for roadway repairs for installing the 50 L.F. of open cut casing across Old Atlanta Road and for installing 220 L.F. of 6” force main across the driveway to the apartment complex on Old Atlanta Road.

2. Refer to Section 02530 – Sanitary Sewer Collection System. Add the following paragraph 2.11 to the specs.

#### **2.11 BACKFLOW PREVENTERS**

- A. Backflow preventers shall be of reduced pressure type with two

(2) independently operating check valves and shall be designed to operate in a horizontal flow mode. An independent relief valve shall be located between the two check valves. Bronze body construction, silicon rubber disc material, replaceable polymer check seats, removable stainless steel relief valve seat, and NPT connections. The assembly shall include two resilient seated isolation valves, four resilient seated test cock, and an air gap drain fitting. The assembly shall meet all requirements of AWWA C511 and shall be as manufactured by Watts, Apollo, Zurn, or Engineer approved equal. The backflow preventer shall be installed above ground in a fiberglass box with a heater as shown on the Drawings.

## II. DRAWINGS

1. Refer to Sheet 6. Replace the site plan of the pump station in the upper left-hand part of the sheet with the attached detail labeled: Existing Sewer Line A – Plan View.

**CLARIFICATION:** This revised site plan shows the linear feet of proposed asphalt roadway at the pump station that should be used by the Bidder in pricing their work for Item No. 1 in the Bid Form and also Additions/Deductions No. 3.

2. Refer to Sheet 8
  - a. Under the Rehabilitation Scope paragraph, strike Notes 6, 7 & 8 and replace them with the following notes:
    - “6. APPLY TNEMEC SERIES 217 OR ENGINEER APPROVED EQUAL CEMENTITIOUS REPAIR MORTAR IN ACCORDANCE WITH THE MANUFACTURER’S INSTRUCTIONS TO REPAIR SPALL AREAS AND COMPLETE PARTIAL DEPTH REPAIRS WHERE CONCRETE HAS DETERIORATED AND/OR DELAMINATED. ASSUME FOR BID PURPOSED THAT 10% OF THE INTERIOR CONCRETE SURFACE AREA WILL REQUIRE SPALL REPAIR. ALL REPAIRS SHALL RESULT IN A SMOOTH, UNIFORM SURFACE READY FOR FINISH PROTECTIVE COATINGS AS SPECIFIED HEREIN.
    7. REMOVE EXISTING GROUT AT ANY LEAKING JOINTS FOUND AND PRESSURE INJECT PRIME FLEX 900 XLV OR ENGINEER APPROVED EQUAL POLYURETHANE RESIN IN ACCORDANCE TO THE MANUFACTURER’S INSTRUCTIONS. APPLY CEMENTITIOUS REPAIR MORTAR TO PACK JOINT AND PROVIDE A SMOOTH, UNIFORM SURFACE READY FOR FINISH PROTECTIVE COATING AS SPECIFIED HEREIN.
    8. APPLY PROTECTIVE COATINGS TO ALL SURFACES INSIDE THE WET WELL EXPOSED TO RAW WASTEWATER AND/OR

WASTEWATER FUMES. COATINGS SHALL BE AS SPECIFIED  
HEREIN FOR THE DIFFERENT SUBSTRATE MATERIALS."

- b. Under the Protective Coatings paragraph, Note 5, change "TNEMEC Series 451" to read "TNEMEC Series 431".
- c. Under Piping, Valves & Accessories paragraph, Note 2, strike the first sentence pertaining to cement mortar lining and bituminous seal coat and replace that sentence with the following:

"PIPE AND FITTINGS SHALL HAVE AN INTERIOR AND EXTERIOR COATING AS DESCRIBED IN PROTECTIVE COATINGS."

- 3. Refer to Sheet 9. Under the Backflow Preventer detail, change the "(See SPEC. SECT. 02510)" to read "(See SPEC. SECT. 02530)."

CLARIFICATION

- 1. Refer to Sheet 7: There is a note on the plan view pointing to the existing sewer line that says: "Existing Sanitary Sewer Line (To Be Rehabilitated). See Sheet 6 for Details." The existing sewer line is PVC and does not require any rehabilitation. However, only the three manholes on this gravity sewer line shown on Sheet 6 require rehabilitation.
- 2. **QUESTION:** Is there a specification for the generator?  
**ANSWER:** There is no separate generator specification. Information regarding the generator can be found on Sheet E-2 of the electrical drawings.
- 3. **QUESTION:** Is the contractor responsible for all traffic control work, or will the city provide signage or other items?  
**ANSWER:** The contractor will be responsible for all traffic control work. The city will not provide any signage or other items.
- 4. **QUESTION:** I see a yard hydrant on the drawing site plan to be installed, but I do not see anything mentioning the location of the existing or new piping or a backflow preventer. I assume one is required since it is mentioned in the details. Please clarify the yard wash down water piping.  
**ANSWER:** The backflow preventer detail is shown on Sheet 9. The Contractor can tie the proposed backflow preventer to the existing water service line that is already run to the existing yard hydrant; however, the Contractor will be responsible for any new piping to connect the backflow preventer to the existing water line and to the proposed yard hydrant. All new service line required shall be Copper Type L as shown on this detail.
- 5. **QUESTION:** The backflow preventer detail on Sheet 9 references Specification Section 02510, but there is not one in the specs. Please provide a spec or model for this item.  
**ANSWER:** A specification for the backflow preventer has been added to Section 02530 and the detail on Sheet 9 updated with the correct reference. Note too that the fiberglass box shall be provided with a heater and the electrical drawings Sheet E-2 shows a proposed 120V, 20A 1 Phase power to a receptacle whose location shall be coordinated in the field during

construction with the location of the fiberglass box.

6. **QUESTION:** The table of contents reference a fence spec Section 02823, but there is not one. Please clarify.  
**ANSWER:** There is no specification for the fence. All information regarding the fence is shown on the Drawings on Sheet 9. Please strike the reference to Section 02823 from the Table of Contents.
7. **QUESTION:** What is the maximum downtime that the two pump stations can experience to perform the tie-in and maintenance work needed to be done?  
**ANSWER:** According to City personnel, the maximum time that a pump station can be down is approximately one (1) hour. However, the Contractor may find extended times during off-peak hours where low flows may occur.
8. **QUESTION:** Where does the effluent of MH B-1 go? We will have to bypass to replace this manhole so please clarify where we can insert the bypass effluent. Also, is there a flow rate to this line?  
**ANSWER:** City personnel are investigating this issue and we will respond in a follow-up addendum if necessary.
9. **QUESTION:** Is there a valve just above the pump station that can be shut in order to prevent the entire contents of the force main from dumping when it is cut, or will we have to install an insertion valve to prevent this from happening?  
**ANSWER:** The City is unaware of any in-line valve on the force main downstream of the existing pump station so the Contractor will be responsible for developing the means and methods to prevent the sewage in the force main from dumping and spilling during the tie-in. Using an insertion valve is acceptable.
10. **QUESTION:** Upon review of Drawing E-2, Note 4, I am seeking information pertaining to the relationship between the mission M-800 and the SQL OPS Driver to interface with the City's existing "Wonderware" HMI Software. Also, can you provide contact information for the System Integrator for the City's existing "Wonderware" SCADA system located at their wastewater treatment plant?  
**ANSWER:** Please see attached information for the OPC Data Link to be used for a data linkage between Mission data servers and plant SCADA system "Wonderware" HMI. In order for "Wonderware" HMI to communicate with the I/O to a Mission Controls M800, the OPC Driver and an internet connection at the HMI Server are needed. No need to go thru an additional CTU. The registers would be populated through port 23 on the HMI server. The original Systems Integrator who set-up and installed the SCADA system at the WWTP was Southern Flow, Inc. (770) 667-5169; however, there is no pre-approved Systems Integrator for this project. The Contractor may provide their own Systems Integrator to set up the Mission system and make the necessary modifications to the interface to the City's existing SCADA system.

END OF ADDENDUM NO. 5



# ***MISSION Communications***

## **Data Link for SCADA-HMI**

### **1/31/2013**

## **Purpose**

The first part of this document gives decision makers an overview of what is involved with a data linkage between Mission data servers and your SCADA-HMI system. Included in this section is an overview of security in layman's terms.

The second part is a detailed description of the configuration steps involved. Your system integrator and IT professional should be familiar with the terms and concepts discussed in this section.

## **Covers:**

Mission Enterprise Server (Jan 2012)

Mission Driver:

[Mission OPC Server V5.0 15-Nov-2011](#)

## **Overview**

The Mission M800, M110 and M80 Remote Terminal Units (RTU) send data into our secure computer center on a periodic basis (2 minute, 1 hour and 3 day respectively.) The data is processed and stored indefinitely. That same data can also be "pulled" into your SCADA Human Machine Interface (HMI) software via a Mission Driver.

Regardless of this linkage, data from Mission RTUs is stored on Mission's data servers and the Mission web portal is always available for viewing the data or even alarming based on events. Most users interested in a data linkage utilize their SCADA-HMI for alarming and reporting but some take a hybrid approach. The hybrid workflow can take many forms. For example, some utilities utilize Mission's event alarming functionality and their traditional system as a historian; others use Mission as a "warm" backup system.

The Mission Driver that enables the data linkage resides on a computer host on your premises. The driver requests data from the Mission data servers. Customers who have Mission units associated with two or more "accounts" (AKA websites; for example YourCityWater and YourCityWasteWater) can use one driver to retrieve data from both sites. Customers with redundant SCADA-HMI systems can be accommodated also. Details of these configurations are described below.

The *MISSION* driver complies with the OPC standard. OPC (OLE for Process Control) is a data-formatting standard by which compliant SCADA-HMI software and sub systems exchange data. The data is sent securely through the Internet by way of data encryption and credential validation. Most commercial SCADA-HMI packages (WonderWare, Intellution, Trihedral etc.) use the OPC format therefore are compatible with the Mission Driver. More information concerning OPC is available at [www.opcfoundation.com](http://www.opcfoundation.com). OPC currently has several flavors, the newest of which are downward compatible. The Mission Driver supports OPC Data Access v2 and v1.1.

The primary challenge of the data linkage is getting the data through firewalls and to the SCADA-HMI software while protecting the enterprise from unauthorized users.

## Terminology

Each computer (host or server) has a unique IP (Internet Protocol) Address. The processes running on the host are identified by a Port number. The IP address is like the street address to an apartment building and the port number is like an identifier to someone doing something inside an apartment at that address. In other words, the IP address plus port define end points of a specific data conversation. A socket connection is the path through which the conversation travels. A secure socket connection means the conversation is encrypted so that no one can “eavesdrop” on the conversation or, interject into it. A firewall is located at the “edges” to maintain the port details and isolate the trusted network from the untrusted one (internet.) Firewalls can be software, hardware or a combination of both. Firewalls can prevent access into or out of a network even to the level of the “type” (protocol) of conversation.

Most businesses have at least one public IP address, and numerous private IP addresses behind a firewall. A properly configured firewall will resolve a public IP address and Port to a specific process on a specific server on the private network.

## Realtime Viewer

Often customers find that the RTV solution plus Mission’s standard web portal satisfy their real-time data needs. Running the RTV application is a good exercise to get familiar with the concept of real-time data before the full OPC link is established. *MISSION* provides the RTV program at no charge. It can be downloaded from your User Portal (Current Status/Realtime Viewer.) Generally no changes are required to your firewall since the session is initiated from within your trusted network. However, on highly secure networks the administrator of your Firewall may need to “open” port 9006 for an outbound connection. It should be noted that the Mission M800 “Real Time” RTU is the model RTU that presents quickly changing data (2-minute analog updates, real-time pump starts) therefore is the only RTU displayed within RTV. Further information about RTV is available during our weekly webinars. Contact your Mission salesman for a white paper on RTV.

## Mission Driver

*MISSION*’s Driver software is the “middle-ware” that bridges the Mission data servers to your SCADA-HMI and resides on your network. Once credentials are validated, requests for data from Mission’s servers will be fulfilled. Your SCADA-HMI establishes an OPC link with this driver. Port 23 of your firewall must be open for an outgoing connection. The driver is either installed on the main SCADA-HMI host within your premises or a second dedicated computer. That host may have a permanent broadband Internet connection or reside on a LAN that has an enterprise level internet connection. The data moving between Mission’s data servers and the Mission Drivers is in a proprietary format using Cyclic Redundancy Check (CRC) and built in encryption.

## Security

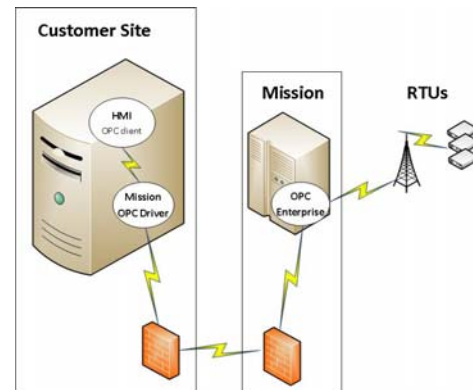
Robust security features are built into the *MISSION* Driver.

First, your SCADA-HMI connects to the *MISSION* Driver and is not required to have a direct internet connection. Second, only an outbound socket connection is opened to the Mission Servers. Since the session is initiated from within the trusted network the customer’s firewall does not need to open an incoming door (port) for an unsolicited request from the outside.

In other words, a specific encrypted session is established after security credentials are validated, and the client's Firewall prevents data from being "pushed" in from the outside.

## VPN Security

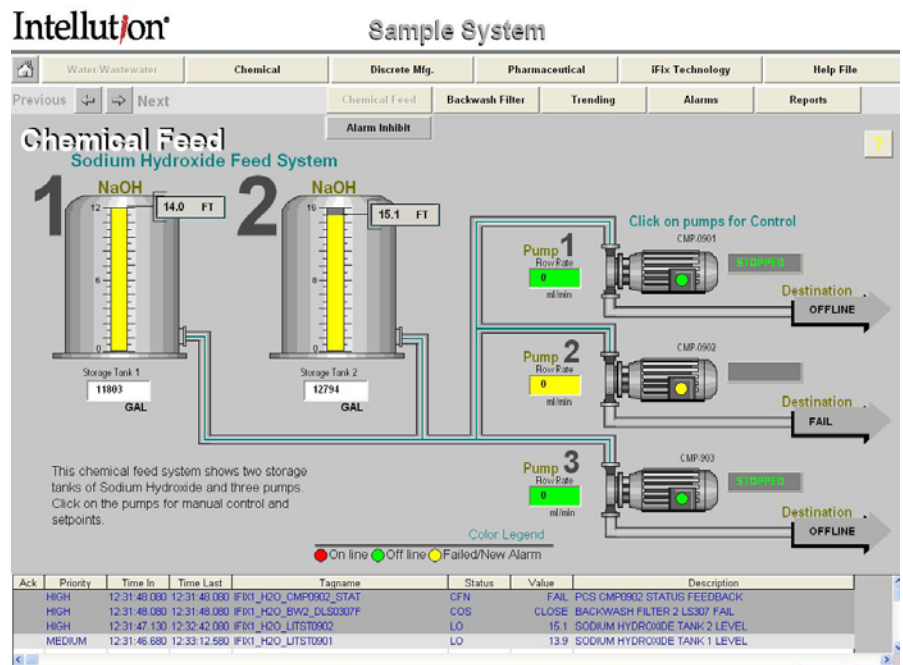
*MISSION* offers a Virtual Private Network (VPN) option for additional security. Setting up a VPN involves the customer buying a compatible VPN endpoint to connect with Mission's endpoint. These two boxes can only "talk" to each other; one is "hosted" by *MISSION* and the other is at your site. VPN's utilize 128-bit AES encryption and require a matching key on both sides.



## SCADA-HMI

Numerous vendors provide SCADA-HMI software including WonderWare, Intellution and Trihedral. These allow monitoring and control of the disparate devices throughout the full enterprise. Once configured the data from an RTU can graphically be presented.

Your integrator or SCADA professional is responsible for configuring your specific SCADA-HMI software. Each SCADA solution has its unique configuration tools and can accept data in a variety of formats. Many HMIs have a scripting language to allow even greater flexibility.



## Requirements for a Data Linkage

1. A Mission Customer "account" with at least one RTU.
2. A SCADA-HMI that supports OPC DA v2, v1.1
3. Outbound internet access from Customer's local server that will be running the Mission Driver. Generally this is the HMI server. The driver only requires outbound port 23.
4. Mission Driver Login credentials (available from Mission Tech Support.) For testing purposes Tech Support can provide you with both a production and test credential set. There is no functional difference between the test credentials and the production ones.
5. The Mission OPC driver (contact your Mission Sales Associate.)



## Installing the Mission Driver

Mission Tech Support will email you a link to the Mission driver and inform you of your credentials. The zipped file will be named MissionApp\_0.exe. The uncompressed file is named Mission.exe. Copy the file to the local computer in a folder such as (C:\MissionRun.)

The Mission driver relies on OPC foundation drivers (DLLs) that are NOT included with the driver but are generally included as part of your SCADA-HMI.

If you do NOT have these drivers (or even a SCADA-HMI at this point) but would like to test the system you can download a light weight HMI test client from Matrikon.com. (It is also available from Mission.)

Your firewall administrator may need to create an outbound “allow” firewall rule for port 23 to opc.123mc.com. This URL resolves to a fixed IP (64.88.167.4) that can be used to lock down outbound firewall rules if so desired.

## Launch the Driver

The first time that the driver is launched, please right-click the driver name and select: “Run as Administrator”. This is necessary to permit the driver to write essential information to the PC’s registry. Launch the Mission-Driver, enter the credentials supplied to you. From this point forward the driver will launch, when needed (even after a computer restart.) Use the “test” credentials during your setup and testing phases, and the switch to the production credentials when appropriate.

Next you will be asked to Register the driver on your system. Select OK to allow your HMI to find the Mission OPC Driver.

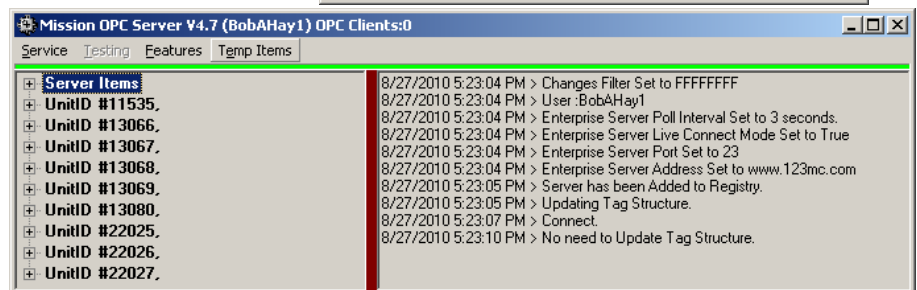
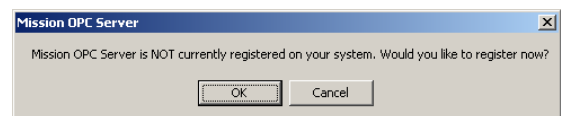
Note: If you move the Mission driver from the initial folder you will need to unregister and re-register from the Mission Driver menu.

You should see the tag list of the various devices on your site including the state of the inputs. The green bar indicates a live connection to Mission.

If you have more than one Customer account with Mission (YourWastewater and a YourFreshwater for example), and wanted to monitor both from the same SCADA-HMI Mission

Tech support can configure the same username and password on Mission’s side for both accounts. In other words, only one OPC link from your SCADA-HMI to a single Mission Driver is required.

If you have redundant SCADA-HMI systems you will want to have independent Mission drivers on each redundant system. The passwords and credentials MUST be different. Mission Tech Support can set up an additional username and password.

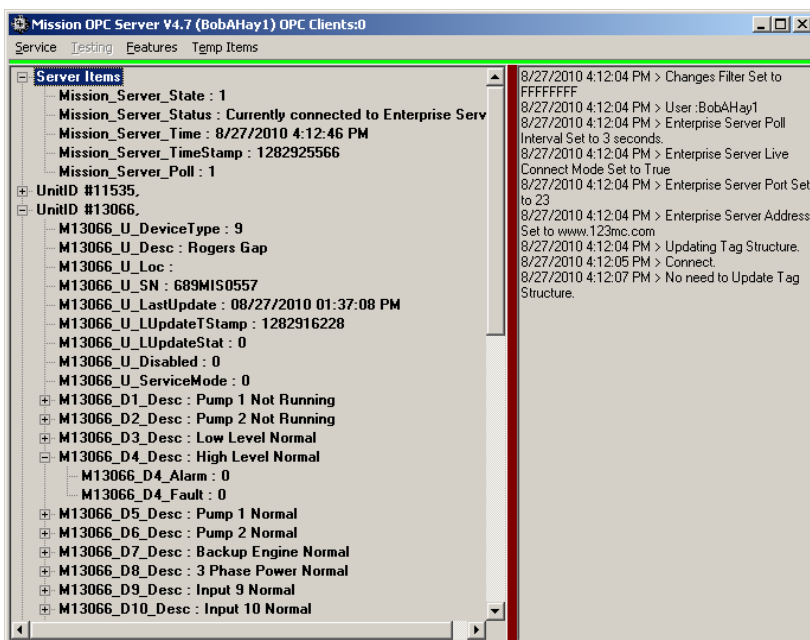


Generally you should not connect (log-in) more than once with the same credentials. You can use the Windows Task Manager to confirm that only one instance is running on a particular host. As of the 2011 release, concurrent connections with the same user code and password are supported. However, only one of the multiples can be running an older version of client. We recommend that all drivers be updated to the current version.

The RTUs associated with your Mission account(s) are identified by an M#. Notice the field labeled M3066\_U\_Desc: as well as ...LOC and SN. These will give you an indication of the actual name of this device and location that were supplied to Mission at start up.

## Connect SCADA-HMI to Mission Driver

The connection between your SCADA-HMI and the Mission Driver is performed from within your SCADA-HMI. Therefore we can only give you general guidance from here on.



OPC has multiple interface standards. Mission used OPC Data Access Ver #2 and registers the Drivers ProgID MISSION.DA2.2 in the Windows Registry, hence the name MISSION.DA2 program ID. It is downward compatible with Ver #1.1.

Configure your SCADA-HMI to utilize OPC DA2 protocol to connect with the Mission Driver MISSION.DA2.2. Next define the specific tags (RTU data points) in which you are interested. Some SCADA-HMI require you first create notification containers called groups. Then the specific OPC TAGS are assigned to the group(s.) The groups are configured to either poll the MissionDriver for changes (sync) or request that the MissionDriver tell the client something has changed in the group at the time it happened (async).

Next the Integrator or SCADA-HMI specialist can present the data graphically and perform alarming functions as desired.

## Addition of RTUs after a Connection is Established

If you add more RTUs to your Mission environment, Mission Tech Support will need to briefly reset the session at the Mission Data servers. The Mission Driver should automatically reconnect and present the new units.

### Upstream vs. Downstream Data

At this time all data is from the Mission Data Center to the Driver, and then on to your SCADA-HMI with the exception of the relay state. Your integrator can have a change in the relay state tag propagate upstream to the Mission Data center and subsequently to the field RTU. Confirmation of the successful change of state is available from the corresponding tag.

## OPC Tag Definitions

Most tags are specific to the RTU but a few tags relate to the Mission System itself.

**Mission\_Server\_State** State of the connection to the Mission (Boolean)

**Mission\_Server\_Status** Textual description of connection state (String)

Desc: Indicates the state of the internet connection to Mission Enterprise server.

**Mission\_Server\_Time** Timestamp of last connection to Mission (String)

**Mission\_Server\_TimeStamp** UNIX format Timestamp of last connection to Mission (Unsigned Int)

**Mission\_Server\_Poll** Toggles when Timestamp gets updated (Boolean)

Desc: Timestamps of the last update from the Mission Enterprise Server.

The remaining tags are “Unit Tags” and relate to specific RTU states

**Mnnnn\_U\_DeviceType** Unit Device type (Unsigned Int)

Desc: 4=M100, 5=M800 (Nextel), 7=M80, 8=M110 , 9=M800

**Mnnnn\_U\_Desc** Unit description (String)

**Mnnnn\_U\_Loc** Unit location (String)

**Mnnnn\_U\_SN** Unit serial number (String)

**Mnnn\_U\_LastUpdate** Last communications with Unit (String)

**Mnnn\_U\_LUpdateTStamp** Unit UNIX timestamp of LastUpdate(Unsigned Int).

**Mnnn\_U\_LUpdateStat** Unit connection state 0/False = On-line, 1/True = Off-line (Boolean).

**Mnnnn\_U\_Disabled** Unit Mission Notification disabled (Boolean)

**Mnnnn\_U\_ServiceMode** Unit in Service Mode flag (Boolean)

Desc: Service Mode is when there is someone at the device working on/testing the unit.

This is to suppress alarm notifications while the work is being performed.

**Digital Inputs** xx=01-16

**Mnnnn\_Dx\_Desc** Current state description (String)

**Mnnnn\_Dx\_Alarm** Alarm state for given input 1/True =In Alarm (Boolean)

**Mnnnn\_Dx\_Fault** Fault state for given input 1/True=Wire problems (Boolean)

Desc: Alarm is the off-normal state of a digital input. Digital inputs are normally Open

by default but can be logically changed to normally Closed by Mission Communications.

**Analog Inputs** x=1-6

**Mnnnn\_Ax\_Desc** Current state description (String) For analog thresholds

**Mnnnn\_Ax\_State** State (Unsigned Int) For analog thresholds

**Mnnnn\_Ax\_Value** Last reported/current value (Unsigned Int) 0-1023

Desc: Desc and State tags are used only for Analog alarm thresholds set at/for Mission

Notifications only. If a set threshold has changed state these tags will update.

Value is updated only when a threshold state change has changed when unit is an M100. Value on an M800 sends live analog changes all the time and can be used to trip HMI side trigger levels and graphing.

#### AC Power

**Mnnnn\_AC\_Desc** AC power description (String)

**Mnnnn\_AC\_Fault** AC power fault flag 1/True = No AC (Boolean)

**Mnnnn\_AC\_Volts** AC voltage (String)

**Outputs** x=1-3

**Mnnnn\_Ox\_Desc** Output Description (String)

**Mnnnn\_Ox\_On** Output on state 1/True = Output is currently ON (Boolean)

**Mnnnn\_Ox\_Control** Output state change request. (Boolean) Change this to request change output to the entered state.

#### Dallas Access Key

**Mnnnn\_Key\_Hex** Last 4 Hex digits (String)

**Mnnnn\_Key\_Name** Name of user key is assigned to (String)

**Mnnnn\_Key\_Time** Time key was used (String)

**Mnnnn\_Key\_TimeStamp** Unix Timestamp when key was used (Unsigned Int)

#### Rain

**Mnnnn\_Rain\_Today** Total Rain reported so far today (Unsigned Int)

**Mnnnn\_Rain\_Yesterday** Total Rain reported yesterday (Unsigned Int)

**Mnnnn\_Rain\_Time** Time/Day for rain report values (String)

**Mnnnn\_Rain\_TimeStamp** Unix Timestamp when Time/Day for rain report values (String)

**Flows** x=1-2

**Mnnnn\_Flowx\_Today** Total Flow reported today (Unsigned Int) M100s only

**Mnnnn\_Flowx\_Yesterday** Total Flow reported yesterday (Unsigned Int) M100s only

**Mnnnn\_Flowx\_Raw** Raw optional Pulse Board counter values (Unsigned Int) Real Time Units only V4.5+

**Mnnnn\_Flowx\_Time** Time/Day for Flow report values (String)

**Mnnnn\_Flowx\_TimeStamp** UNIX Timestamp when Time/Day for Flow report values (String)

**Pump Run Times** x=1-3

**Mnnnn\_Pumpx\_Today** Total Pump Run time reported today (Unsigned Int)

**Mnnnn\_Pumpx\_Yesterday** Total Pump Run time reported yesterday (Unsigned Int)

**Mnnnn\_Pumpx\_Time** Time/Day for Pump Run time report values (String)

**Mnnnn\_Pumpx\_TimeStamp** UNIX Timestamp when Time/Day for Pump Run time report values (String)

#### Battery

**Mnnnn\_Batt\_Desc** Description of battery state (String)

**Mnnnn\_Batt\_Fault** Battery fault flag 1/True = bad battery (Boolean)

**Mnnnn\_Batt\_Volts** Last reported battery voltage (String)

## New Tags Nov 2011:

### Scaled Analog

**Ax\_Scaled\_Value** and **Ax\_Scaled\_Units** presenting scaled values with Mission web site settings.

### Analog Output Control

**An\_Ox\_Value** and **An\_Ox\_Control** to allow control of analog output settings.

Note the Output set is the same as Relay set. Changing tag Control requests the value to change at the RTU.

When the change happens, Value will be set to the same as positive feedback.

### Analog Flow

**An\_Flowx\_Value**, **AnFlowx\_Units** and **AnFlowx\_Time** Hourly Analog flow data.

## FAQ

### **How does the SCADA-HMI know if the M110 RTU has an analog in alarm?**

M110 RTUs only send in analog values hourly, or when a stored (at RTU) analog threshold is breached. Therefore the Mission web portal should be used to set the analog alarm threshold values for M110 RTUs.

### **How do you uninstall the Mission driver?**

The App auto installs itself and has no normal windows install. With the OPC Driver running, go to the menu and select Unregister Server. Shut it down; then delete the Mission.exe and all the related data and log files.

### **How do log files age?**

Log files are optional. There is a menu option to both “show driver” and “enable logging” in the Mission Driver. The log files are date stamped and hold values for one day. There is no automatic log clean-up. If enabled, customer must handle the management of old log files.